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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR     | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|--------------------------|---------------------|------------------|
| 10/659,875   | 09/09/2003  | Kouichi Yamamoto         | 9281-4645           | 5233             |
| 7590 11/09/2005  |             |                          |                     |                  |
| Brinks Hofer Gilson & Lione<br>P.O. Box 10395<br>Chicago, IL 60610 |             | EXAMINER<br>TRAN, DALENA |                     |                  |
|  |             | ART UNIT PAPER NUMBER    |                     |                  |
|  |             | 3661                     |                     |                  |
| DATE MAILED: 11/09/2005  |             |                          |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/659,875

**Applicant(s)**

YAMAMOTO ET AL.

**Examiner**

Dalena Tran

**Art Unit**

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Notice to Applicant(s)**

1. This office action is responsive to the amendment filed on 8/31/05. As per request, claim 2 has been amended, claims 6-7 have been added. Thus, claims 1-7 are pending.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, and 4-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nantz et al. (6,647,773) in view of Imao et al. (6,505,507), and Lin (6,259,362).

As per claim 1, Nantz et al. disclose a tire air pressure abnormality warning device comprising: a transmitter for transmitting a signal that corresponds to air pressure of a tire measured by a pressure sensor (see at least column 3, lines 40-53; and column 4, lines 25-64), a portable keyless entry device for operating and closing a door lock of a vehicle (see at least columns 3-4, lines 54-14), a vehicle-installed device for determining whether or not the air pressure of the tire is abnormal by receiving the signal from the transmitter in order to output data regarding the determination, the vehicle-installed device driving the door lock by communication with the portable device (see at least column 3, lines 60-64; and columns 4-5, lines 65-50). Nantz et al. do not disclose a recording section for recording data of any abnormality in the air pressure of the tire. However, Imao et al. disclose the vehicle-installed device comprises a recording section for recording data of any abnormality in the air pressure of

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the tire (see at least columns 3-4, lines 48-24), and wherein the vehicle-installed device searches for any abnormality data from the recording section when the vehicle installed device communicates with the portable device, so that, when there is abnormality data, a tire air pressure abnormality signal is transmitted to the portable device (see at least columns 4-6, lines 25-18). Nantz et al. also do not disclose the portable device comprises a warning. However, Nantz et al. disclose a remote device comprises a display for use in conveying tire pressure information to a user (see at least column 6, lines 44-47), and a pressure outside a recommended range can be immediately identified to the driver (see at least column 6, lines 28-29). It is obvious to one of ordinary skill in the art that "Immediately identified to the driver when a pressure outside a recommended range" implies a warning. Therefore, Nantz et al. implicitly disclose the portable device indicates a warning of an abnormal air pressure of the tire by the tire air pressure abnormality signal that the portable device has received. Also, to modify for the teach of Nantz et al., Lin disclose the portable device comprises a warning indicating section for indicating that the air pressure of the tire is abnormal, and wherein the portable device indicates a warning of an abnormal air pressure of the tire by the air pressure abnormality signal that the portable device has received (see at least column 2, lines 56-65; columns 4-5, lines 27-13; and columns 5-6, lines 31-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Nantz et al. by combining the portable device indicates a warning of an abnormal air pressure of the tire for alerting vehicle pressure abnormal information to a vehicle operator, so the driver can take an appropriate action to repair the vehicle tire; also, it would have been obvious to one of ordinary skill in the art to modify the teach of Nantz et al. by combining a recording section for recording data of any abnormality in

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the air pressure of the tire for later use or to send a message to user when the user communicate to the vehicle system.

As per claim 2, Nantz et al. do not disclose the communication between the vehicle-installed device and the portable device using a request and answer signal. However, Imao et al. disclose the communication between the vehicle-installed device and the portable device is a passive keyless entry communication using a request signal from the vehicle-installed device to the portable device and an answer signal from the portable device to the vehicle-installed device, and wherein the tire air pressure abnormality signal is transmitted along with the request signal (see at least columns 5-7, lines 19-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Nantz et al. by combining the communication between the vehicle-installed device and the portable device using a request and answer signal to transmit appropriate data signals related to the tire air pressure of vehicle.

Also, as per claim 4, Imao et al. disclose the transmitter periodically measures the air pressure of the tire and transmits measured value to the vehicle-installed device determines that the air pressure of the tire is abnormal, the vehicle-installed device records abnormality data in the recording section, with a driver receiving the data from the recording section when the driver gets into or out of the vehicle (see at least columns 4-6, lines 24-18).

Claim 5, is method claims corresponding to device claim 1 above. Therefore, it is rejected for the same rationales set forth as above.

As per claim 6, Nantz et al. disclose a tire air pressure abnormality warning device comprising: a transmitter for transmitting a signal that corresponds to air pressure of a tire

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measured by a pressure sensor (see at least column 3, lines 40-53; and column 4, lines 25-64), a portable keyless entry device for operating and closing a door lock of a vehicle (see at least columns 3-4, lines 54-14), a vehicle-installed device for determining whether or not the air pressure of the tire is abnormal by receiving the signal from the transmitter in order to output data regarding the determination, the vehicle-installed device driving the door lock by communication with the portable device (see at least column 3, lines 60-64; and columns 4-5, lines 65-50). Nantz et al. also do not disclose the portable device comprises a warning.

However, Nantz et al. disclose a remote device comprises a display for use in conveying tire pressure information to a user (see at least column 6, lines 44-47), and a pressure outside a recommended range can be immediately identified to the driver (see at least column 6, lines 28-29). It is obvious to one of ordinary skill in the art that "Immediately identified to the driver when a pressure outside a recommended range" implies a warning. Therefore, Nantz et al. implicitly disclose the portable device indicates a warning of an abnormal air pressure of the tire by the tire air pressure abnormality signal that the portable device has received. Also, to modify for the teach of Nantz et al., Lin disclose the portable device comprises a warning indicating section for indicating that the air pressure of the tire is abnormal, and wherein the portable device indicates a warning of an abnormal air pressure of the tire by the air pressure abnormality signal that the portable device has received (see at least column 2, lines 56-65; columns 4-5, lines 27-13; and columns 5-6, lines 31-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Nantz et al. by combining the portable device indicates a warning of an abnormal air pressure of the tire for alerting vehicle

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pressure abnormal information to a vehicle operator, so the driver can take an appropriate action to repair the vehicle tire.

Nantz et al. also do not disclose the communication between the vehicle-installed device and the portable device using a request and answer signal. However, Imao et al. disclose the communication between the vehicle-installed device and the portable device is a passive keyless entry communication using a request signal from the vehicle-installed device to the portable device and an answer signal from the portable device to the vehicle-installed device, and wherein the tire air pressure abnormality signal is transmitted along with the request signal (see at least columns 5-7, lines 19-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Nantz et al. by combining the communication between the vehicle-installed device and the portable device using a request and answer signal to transmit appropriate data signals related to the tire air pressure of vehicle.

As per claim 7, Nantz et al. disclose a tire air pressure abnormality warning device comprising: a transmitter for transmitting a signal that corresponds to air pressure of a tire measured by a pressure sensor (see at least column 3, lines 40-53; and column 4, lines 25-64), a portable keyless entry device for operating and closing a door lock of a vehicle (see at least columns 3-4, lines 54-14), a vehicle-installed device for determining whether or not the air pressure of the tire is abnormal by receiving the signal from the transmitter in order to output data regarding the determination, the vehicle-installed device driving the door lock by communication with the portable device (see at least column 3, lines 60-64; and columns 4-5, lines 65-50). Nantz et al. also do not disclose the portable device comprises a warning. However, Nantz et al. disclose a remote device comprises a display for use in conveying tire

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pressure information to a user (see at least column 6, lines 44-47), and a pressure outside a recommended range can be immediately identified to the driver (see at least column 6, lines 28-29). It is obvious to one of ordinary skill in the art that "Immediately identified to the driver when a pressure outside a recommended range" implies a warning. Therefore, Nantz et al. implicitly disclose the portable device indicates a warning of an abnormal air pressure of the tire by the tire air pressure abnormality, the portable device receiving the abnormality signal from the vehicle installed device before the door lock is driven. Also, to modify for the teach of Nantz et al., Lin disclose the portable device comprises a warning indicating section for indicating that the air pressure of the tire is abnormal, and wherein the portable device indicates a warning of an abnormal air pressure of the tire by the air pressure abnormality, the portable device receiving the abnormality signal from the vehicle installed device before the door lock is driven (see at least column 2, lines 56-65; columns 4-5, lines 27-13; and columns 5-6, lines 31-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Nantz et al. by combining the portable device indicates a warning of an abnormal air pressure of the tire for alerting vehicle pressure abnormal information to a vehicle operator, so the driver can take an appropriate action to repair the vehicle tire.

4. Claim 3, is rejected under 35 U.S.C. 103(a) as being unpatentable over Nantz et al. (6,647,773), Imao et al. (6,505,507), and Lin (6,259,362) as applied to claim 2 above, and further in view of Kokubu (5,500,637).

As per claim 3, Nantz et al., Imao et al., and Lin do not disclose the request signal and the tire air pressure abnormality signal are transmitted by operating a door touch switch. However, Pacsai discloses the request signal and the tire air pressure abnormality signal are transmitted by



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operating a door touch switch (see at least columns 4-5, lines 57-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Nantz et al., Imao et al., and Lin by combining the request signal and the tire air pressure abnormality signal are transmitted by operating a door touch switch for remotely convenience control vehicle functions.

### Remarks

5. Applicant's argument filed on 8/31/05 has been fully considered. Upon updated search, the new ground of rejection has been set forth as above.

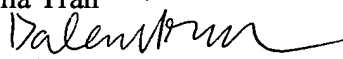
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Dalena Tran

  
November 7, 2005